

SENCHIA, O.

How I reduced the production costs.

P. 2, (Constructorul. Vol. 9, no. 392, July 1957, Bucuresti, Rumania)

Monthly Index of FastEuropean Accessions (EEAI) LC. Vol. 7, no. 2,  
February 1958

SENCHEA, V., ing.

Utilization of hard polycinyl chloride conduits instead of  
metallic pipelines at the Steaua Rosie Cellulose and Paper  
Plant. Cel hirtie 10 no.3:94-96 Mr'61

HOPINCA, A., ing.; SENCHEA, V., ing.

Washing moist cloth in the various chemical agents. Cel hirtie  
11 no.12:414-421 D '62.

TURTUREANU, N., ing.; SENCHEA, V., ing.

Some theoretical and practical problems on the curvature  
of calender and press rollers. Cel hirtie 10 no.12:440-  
447 D\*61.

SENCHEA, V., ing.

The Suceava Pulp and Paper Mill. Cel hirtie 13 no.8;285-294 Ag '64.

COUNTRY : USSR M  
CATEGORY : Cultivated Plants. Cereals.  
ABS. JOUR. : RZhBiol., №.23, 1958, №. 104620  
AUTHOR : Senchenko, A. B.  
INST. : Kamenesk Seed-Testing Laboratory.  
TITLE : Sowing Rate and the Vigor of Growth.  
ORIG. PUB. : Zemledeliye, 1957, No. 3, 83-84  
ABSTRACT : The relation between the initial growth and germination of hard spring wheat Melyanopus 69 and the absolute weight of the seeds was studied at Kamenesk Seed-Testing Laboratory. The test specimens of the seeds were divided into groups according to thickness before being embedded for germination. The smaller the absolute weight of the seeds, the lower the vigor of growth. However, the germination of large seeds was lower in a number of cases. This was connected with the greater damage to their embryos caused by stink-bug, and by injuries at the time of threshing. It is

Card: 1/2

16

SENCHENKO, A.M.

Rate of seeding and the force of grow. Zemledelie 5 ne.3:83-84  
Mr '57. (MLRA 10:3)

1. Kamenskaya oblastnay kontrol'no-semennaya laboratoriya.  
(Sowing) (Growth (Plants))

IL'YASHUK, N.; GRUSHIN, M.; SENCHENKO, B.

Apparatus "Perun-three-15." Prom.koop. 14 no.7:16-17  
Jl '60. (MIRA 13:8)

1. Sotrudniki Nauchno-issledovatel'skogo tekhnokhimicheskogo  
instituta Rospromsoveta.  
(Cleaning and dyeing industry)

SATALKIN, Aleksey Vasil'yevich, doktor tekhnicheskikh nauk; SENCHENKO, Boris Aleksandrovich, kandidat tekhnicheskikh nauk; GOLUBKOVA, Ye.S., redaktor; GALAKTIONOVA, Ye.N., tekhnicheskiy redaktor

[Concrete and reinforced concrete bridge structures subjected to early loads] Rannee nagruzenie betona i zhelezobetona v mostostroenii. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1956. 215 p.  
(Bridges, Concrete)

(MIRA 10:4)

LAKHTIN, Aleksandr Leonidovich; SENCHENKO, Boris Nikolayevich;  
PODKLETNOV, N.Ye., retsenzent; BARINOVA, O.N.; red.

[Dry clearing of clothing] Khimicheskaya chistka odezhdy.  
Moskva, Legkaiaz industriia, 1965. 133 p. (MIRA 18:6)

SATALKIN, A.V., doktor tekhnicheskikh nauk; SENCHENKO, B.A., kandidat  
tekhnicheskikh nauk.

Early step-by-step tensioning of reinforcements for prestressed  
bridge spans. Transp.stroi. 6 no.12:1-6 D 1956. (MLRA 10:3)  
(Bridges, Concrete)

SATAL'IN, A.V., doktor tekhn.nauk; SENCHENKO, B.A., kand.tekhn.nauk;  
KOMOKHOV, P.G.; KORNILOV, A.I., inzh.; PAVLOV, V.N., inzh.

Concrete mixes for mold rolling and vibration mold rolling.  
Trudy NIIZHB no.33:271-291 '64. (MIRA 18:2)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo trans-  
porta (for Satalkin, Senchenko, Komokhov). 2. Orgtekstroy  
Leningradskogo soveta narodnogo khozyaystva (for Kornilov, Pavlov).

ACC NR: AP7004544

SENCHENKO, D. V. (Moscow)  
ORG: none

SOURCE CODE: UR/0039/66/071/001/0030/0042

TITLE: Unique Definition of Markov Processes with a Finite Number of States

Moscow, Matematicheskiy Sbornik, Vol 71, No 1, Sep 66, pp 30-42

TOPIC TAGS: Markov process, stochastic process.

Abstract: A homogeneous, stochastic, continuous Markov process with a finite number of states is, as is well known, completely specified by transition probability densities  $q_{ij} = p_{ij}(0)$  ( $i, j = 1, 2, \dots, n$ ). The article deals with the question: What similar characteristics can uniquely define a non-homogeneous, stochastic, right-continuous Markov process  $x(t)$  with  $n$  states? In such a case the semiaxis  $0 \leq t < \infty$  is divided into a countable number of half-open intervals  $[a, T]$ , on each of which the process is specified by monotonic functions  $f_a^1(t) = P(x(\tau) \geq i, a \leq \tau \leq t | x(a) = i)$ ,  $i = 1, 2, \dots, n$ ; and the probability densities  $q_{ij}(t)$  for the transition from  $i$  to  $j$  at moment  $t$  with respect to the measure on half-open interval  $[a, T]$  is given by the function  $1 - f_a^1(t)$ . On any segment  $[a, b]$ ,  $b < T$ , a finite number of discontinuities occurs with probability one.

In order to "continue" the process to the half-open interval coming after  $[a, T]$ , it is necessary to know the distribution of  $x(t)$  at moment  $t = T$ . Section 4 of the article is devoted to formulating sufficient conditions under

UDC: 519.21

0936

1370

B-5

USSR / General Biology. Genetics.

Abs Jour : Ref Zhur - Biol., No 12, 12, 1958, No 52444

Author : Senchenko, G. I.; Nevinnykh, V. A.

Inst : Not given

Title : Remote Hybridization in Hemp Selection.

Orig Pub : Selektsiya i semenovodstvo, 1957, No. 4, 12-17

Abstract : In selection of hemp the late-ripening, tall, large-seeded southern variety was crossed with the early, short-growing, and small-seeded northern variety. The F<sub>1</sub> was intermediate in speed of ripening as compared with the parents, but was closer to the quicker-ripening. The following varieties were obtained: Glukhovskaya 6, Toguchinskaya and Kubanskaya 2311. The hemp culture was successfully crossed with two botanically undetermined strains of the same variety of the Furcraea section; both were lacking in spines. The F<sub>1</sub> hybrids were characterized by gigantism, lessened prickliness,

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USSR / Cultivated Plants. Technical, Oleaceous, Sugar Bearing  
Plants.

M-6

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58676

Author : Sonchenko, G. I.; Gurzhiy, E. S.

Inst : Not given

Title : New Method of Hemp Selection

Orig Pub : Len i konoplyya, 1957, No 5, 32-34

Abstract : Methods of continuous individual selection and of family-group selection of the best elite plants are described. According to the new method, individual selection is used during the first 2-3 years, and the family-group selection is used in subsequent years. The new method permits to create early ripening high fiber yielding hemp varieties more rapidly. With the aid of this method, a new selection variety,

Card 1/2

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SENCHENKO, G. I.

USSR/Cultivated Plants. Technical Plants. Oil and M  
Sugar Bearing Plants.

Abs Jour : Ref Zhur-Biol., No 15, 1958, 63284

Author : Senchenko, G. I.  
Inst : All-Union Scientific Research Institute of  
Bast Crops.

Title : Directed Selection for Hemp Fibration.

Orig Dub : Tr. Vses. n.-i. in-t lub. kul'tur, 1957, No 22,  
169-178

Abstract : The results of selection work on hemp carried  
out at the All-Union Scientific Research In-  
stitute of Bast Crops are presented. Guided  
development of the plants in order to increase  
the fiber content of the stalks constituted the  
method which was used. The Novgorod-Severskaya

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TIMONIN, M.A., kand. tekhn. nauk; SENCHENKO, G.I., kand. sel'khoz. nauk; ARINSHEYN, A.I., kand. sel'khoz. nauk; GORSHKOV, P.A., doktor sel'khoz. nauk; ZHUKOV, M.S., kand. sel'khoz. nauk; DEMKIN, A.P., kand. sel'khoz. nauk; KRASHENINNIKOV, N.A., kand. sel'khoz. nauk; GORODNIY, N.G., doktor sel'khoz. nauk; REPYAKH, I.I., nauchn. sotr.; PIL'NIK, V.I., kand. sel'khoz. nauk; KHANIN, M.D., kand. sel'khoz. nauk; TSELIK, V.Z., st. nauchn. sotr.[deceased]; KOZINETS, N.I., nauchn. sotr.; ZHALNINA, L.S., nauchn. sotr.; LYASHENKO, S.N., kand. sel'khoz. nauk; GONCHAROV, G.I., inzh.; BUYANOV, V.I., inzh.; RUDNIKOV, V.N., st. nauchn. sotr.; BLOKHINA, V.V., red.; PROKOF'YEVA, A.N., tekhn.red.; SOKOLOVA, N.N., tekhn.red.

[Hemp] Konoplia. Moskva, Sel'khozizdat, 1963. 462 p.  
(MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lubyanykh kul'tur (for all except Blokhina, Prokof'yeva, Sokolova).

(Hemp)

SENCHENKO, G.S.; FATTAKHUTDINOV, S.G.

Folds in the western border of the Zilair sinclinore as revealed  
by the relief. Vop. geomorf. i geol. Bashk. no.1:17-22 '57.  
(Bolshoy Ik Valley--Folds (Geology)) (MIRA 11:4)  
(Sakmara Valley--Folds (Geology))

SENCHENKO, G.S.

Paleogeography of the Carboniferous period in connection with the  
estimation of promising oil deposits in southern Bashkiria. Vop.  
geomorf. i geol. Bashk. no.1:65-69 '57. (MIRA II:4)  
(Bashkiria--Petroleum geology) : (Paleogeography)

SENCHENKO, G.S.

Role of tangential stresses in the formation of platform structures.  
Vop. geomorf. i geol. Bashk. no. 2:80-106 '59. (MIRA 14:4)  
(Bashkiria—Geology, Structural)

*SENCHENKO, G.S.*

SOV/298

## PHASE I ROCK EXPLORATION

3(5)	Academija nauk SSSR. Bashkirsky filial. Gorno-geologichesky institut	Geology and Oil-bearing Potential of Devonian Sediments of the Bashkiria	1
	Voprosy geologii i neftegazovousti devonianskih olozhenij Zvezdnyj Bashkir'ja i okolitschnykh oblastej: Materialy nauchnoj sessii (Problems of the Geology and Oil-bearing Potential of Devonian Facies at a Scientific Session...), Ufa,		
	- Bashkir'ja, 1977 and idzgent printin		
	- 1970, 137 and 700 copies printed.		
	Ed.: V. V. Sidorov. Tech. Ed.: I. G. Sharifullina. Editorial Board: S. M. Krause (dep. Ed.), N. F. Mir'yakova, I. S. Gorshkov, A. I. Olii, L. N. Romanov, K. R. Tishergain, and A. P. Tyakawa.		
	PURPOSE: The book is intended for petroleum geologists.		
	COVERAGE: This book contains papers on the petroleum geology of Bashkir'ja. These papers were originally read at a conference held in Ufa on December 23-25, 1977. Individual reports discuss the stratigraphy, lithology, geochemistry, tectonic structure, and oil-bearing capacities of the Devonian sediments in Bashkir'ja and adjacent regions. No references are given.		
	Korobkov, I. Z. Stratigraphy of the Devonian Sediments of the Kuybyshevskaya and Orenburg-Pechora Oblasts	41	
	Chubatova, Yu. V. Results of Spore-Pollen Analysis of the Oil and Oil-Water of Bashkir'ja	51	
	Mel'nikov, D. V. Ash-bearing and Barium-bearing Series	57	
	Gor'kin, M. A. Formation Conditions of Kifelian, Givetian, and Lower Frasnian Sediments of Western Bashkir'ja	63	
	Pozhitkov, D. V. Lithology, Reservoir Rocks, and Oil-bearing Potential of the Terrigenous Devonian Beds in the Salskopyaty-Shchigrovskiy Region	73	
	Krause, S. N. Formation Conditions of Terrigenous Middle Devonian Series on the Western Flank of the Southern Urals	77	
	Molchanov, I. A. Lithology and Facies Characteristics of the Upper Devonian Carbonate Deposits on the Western Flank of the Southern Urals	83	
	Tedorchikova, G. I., and R. I. Feofanova. Study of the Mineralogy and Conditions of Sedimentation of Probable Petroleum Devonian Beds in Various Regions of Western Bashkir'ja	89	
	Molchanov, I. A. Tectonics of Devonian Sediments and its Relationship With the Tectonics of Overlying and Underlying Beds	97	
	Olii, A. I., and V. I. Romanov. Tectonics of Bashkir'ja at the Beginning of the Middle Devonian	103	
	Korobkov, I. Z. Tectonic Structure of the Devonian Sediments in the Kuybyshevskaya and Orenburg-Pechora Oblasts	111	
	Soschenko, Yu. S. Morphology of the Folds in the Zone Adjacent to the Marginal Oil-Trap of the Zil'dar'ya Synclinorium in Relation to the Estimates of Oil-producing Capacity of the Devonian and Other Sediments in Southern Bashkir'ja	119	
	Zvezdin, H. A. Prospects of Oil Production From the Devonian Sediments of the Western Flank of the Southern Urals	132	
	AVAILABILITY: Library of Congress (7874-R945675)		
	Card 4/4		

MM/1ab  
12-21-59

ROZHDESTVENSKIY, A.P., otv.red.; VAKHRUSHEV, G.V., red.; ZHURENKO, Yu.Ye., red;  
OLLI, A.I., prof., red.; SENCHENKO, G.S., red.; POROYKOV, Yu.D.,  
red.; KOBYAKOV, I.A., tekhn.red.

[Geomorphology and recent tectonics of the Volga-Ural region and  
the Southern Urals] Geomorfologiya i noveishaya tektonika Volgo-  
Ural'skoi oblasti i Uzhnogo Urala; trudy. Ufa. Akad.nauk SSSR,  
Bashkirskii filial, Gorno-geol.in-t, 1960. 347 p.

(MIRA 14:1)

1. Soveshchaniye po geomorfologii i neotektonike Volg-Ural'skoy  
oblasti i Uzhnogo Urala, Ufa, 1959. 2. Direktor Gorno-geologi-  
cheskogo instituta Bashkirskogo filiala Akademii nauk SSSR (for  
OLLI).

(Volga Valley--Geology, Structural)  
(Ural Mountain region--Geology, Structural)

SENCHENKO, G.S.; OLLI, A.I.

Estimating the oil and gas potential of the southern Ural  
Mountain region. Vop.geol.vost.okr.Rus.platf.i IUzh.  
Urala no.6:5-11 '60. (MIRA 14:7)  
(Ural Mountains--Petroleum geology)  
(Ural Mountains--Gas, Natural--Geology)

SENCHENKO, G.S.; FATTAKHUTDINOV, S.G.

Coal occurrences in the upper Carboniferous of the western  
flange of the Zilair synclinorium. Vop.geol.vost.okr.Rus.  
platf.i IUzh.Urala no.6:85-88 '60. (MIRA 14:7)  
(Zianchurinskiy District—Coal geology)

SENCHENKO, G.S.

Relationship between reef and conglomerate facies in the cis-Ural  
region. Vop.geol.vost.okr.Rus.platf.i IZh.Urala no.7:73-82 '60.  
(MIRA 14:10)

(Ural Mountain region--Reefs)  
(Ural Mountain region--Conglomerate)

SENCHENKO, I.

Modification effected in a project. Neftianik 6 no.7:32 J1 '61.  
(MIRA 14:7)  
(Petroleum--Pipelines)

SENCHENKO, Ivan Andreyevich; RYZHKOV, A.N., red.; MEMESHKINA, L.I., tekhn.  
red.

[The explorers of Sakhalin and the Kurile Islands] Issledovateli  
Sakhalina i Kuril; sbornik statei. IUzhno-Sakhalinsk, Sakhalin-  
skoe knizhnoe izd-vo, 1961. 130 p. (MIRA 14:10)  
(Sakhalin—Discovery and exploration)  
(Kurile Islands—Discovery and exploration)

SENCHENKO, I.F.; KUDRYASHOV, M.G.; FIALKOV, A.A.; MIFTAKHOV, F.V.;  
KATSNEL'SON, I.A.

Specialization of building organizations in power-station  
construction. Prom.stroi. no.10:24-27 '62. (MIRA 15:12)

1. Vsesoyuznyy institut po proyektirovaniyu organizatsiy  
energeticheskogo stroitel'stva.  
(Electric power plants) (Construction industry)

SENCHENKO, I. inzhener

Innovators raise the productivity of machines. Mast. ugli. 3  
no.12:15-16 D '54. (MLRA 8:6)  
(Coal mining machinery)

SENCHENKO, I.

Seminar in methodology held in a petroleum plant. Prof.-tekh.  
obr. 11 no. 4:27-28 Jl '54. (MIRA 7:9)

1. Direktor uchebno-kursovogo kombinata ob"yedineniya "Groznefte-  
zavody"  
(Petroleum industry--Study and teaching)

SENCHENKO, I. (Groznyy); ROMANENKO, A., inzh. (Poltava); GERVITS, P., inzh.  
(Kiyev); SHEBANOV, V. (Kolomna)

Our readers' letters. Izobr.i rats. no.11:45-46 N '58.

(MIRA 11:12)

1. Sotrudnik zavodskoy gazety "Kuybyshevets" Kolomenskogo teplovozo-  
stroitel'nogo zavoda im. V.V.Kuybysheva (for Shebanov).  
(Efficiency, Industrial)

SINCHENKO, I.

Courses for presidents of petroleum refinery committees.  
Neftiankik 5 no.5:31 My '60. (MIRA 13:6)  
(Hours of labor)

SENCHENKO, I.T.

Schools for young efficiency promoters. Neftianik 2 no.1:21-22 Ja  
'57. (MLRA 10:2)

1. Direktor uchebno-kursovogo kombinata ob"yedineniya Groznefte-  
zavody.  
(Petroleum--Refining)

SOV/92-58-6-22-30

AUTHOR: Senchenko, I.T., Director of the Combined Petroleum Refining Training Institute in Groznyy

TITLE: Mastering A Second Profession ( Osvoyeniye vtorikh professiy )

PERIODICAL: Neftyanik, 1958, <sup>3</sup>Nr 6, pp 26-27 (USSR)

ABSTRACT: The movement of Moscow youth to acquire a second profession has found followers among the oilmen at Groznyy. A number of operators of the Groznyy cracking plant have acquired a second profession by learning how to handle controlling and measuring instruments. Their theoretical knowledge was supplemented by practical experience in adjusting, assembling, and reconditioning these instruments. At present all failures of gauges and controllers are rectified by senior operators who have acquired the second profession of repairmen able to overhaul various instruments. This offers the possibility of avoiding the services of the KIP Organization repairmen (Control and Measuring Instrument Organization). Moreover, many of the other operators at the refinery have received training as laboratory technicians able to determine on the spot the viscosity, specific gravity, pour point, and color of a certain petroleum product without any help of the laboratory personnel. These operators were trained at a night class by chemical engineers. In addition, numerous operators, mechanics, and other specialists of the new refinery in Groznyy have also acquired a

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Mastering A Second Profession

SOV/92-58-6-22/30

second profession. Considerable difficulties had to be overcome by them since they were compelled to combine their regular work with supplementary training. A large number of fitters were trained to become welders. The combined Petroleum Refining Training Institute is planning to organize a number of special courses in 1958 which will help workers to acquire an additional specialization. However, the training for a second profession is not yet offered on a large scale. Efforts should therefore be made to widen this educational program.

ASSOCIATION: Groznenskiy uchebno-kursovoy kombinat po neftepererabotke (The Combined Petroleum Refining Training Institute in Groznyy)

1. Petroleum industry—USSR    2. Personnel—Performance  
3. Industrial training

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SENCHENKO, I.

Chief operator I.N.Belozerov's school. Neftianik 5 no.1:27-28 Ja  
'60. (MIRA 13:11)

(Groznyy--Petroleum--Refining)  
(Belozerov, Il'ia Nikitovich)

SENCHENKO, I.

In a palace of culture. Neftianik 5 no.10:29 0 '60.  
(MIRA 13:10)  
(Petroleum—Refining)

SENCHENKO, I.

Construction workers improve their qualifications. Prof.-tekhn.  
obr. 20 no.2:26 F '63. (MIRA 16:2)

1. Direktor uchebno-kursovogo kombinata Upravleniya neftepere-  
rabatyvayushchey i khimicheskoy promyshlennosti Checheno-  
Ingushskogo soveta narodnogo khozyaystva.  
(Chechen-Ingush A.S.S.R.—Building trades—Study and teaching)

SENCHENKO, I.

Active form of the dissemination of the achievements of  
progressive workers. Prof.-tekh. obr. 21 no.10:28-29 O '64.  
(MTRA 17:11)  
1. Direktor Grozneftekhimzavoda ob"yedi-  
neniya "Grozneftekhimzavody".

L 26674-66 EWT(d)/EWP(h)/EWP(1)  
ACC NR: AP6009551

SOURCE CODE: UR/0413/66/000/005/0093/0094

AUTHORS: Amel'kovich, I. I.; Artamonov, Yu. G.; Dyatlov, Ye. S.; Magirovskiy, N. P.; Novozhilov, Yu. A.; Orlov, S. F.; Pikkuvirta, P. O.; Podkovyrin, A. I.; Polyachenko, V. A.; Sanchenko, L. P.; Fedoseyev, O. V.; Shubin, L. V.

ORG: none

TITLE: Machine for gathering, hauling, and transportation of felled trees. Class 45, No. 179539 [announced by Onega Tractor Factory (Onezhskiy traktorny zavod); Leningrad Kirov Factory (Leningradskiy Kirovskiy zavod); Leningrad Forestry Technical Academy im. S. M. Kirov (Leningradskaya lesotekhnicheskaya akademiya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 93-94

TOPIC TAGS: tractor, forestry, forestry product

ABSTRACT: This Author Certificate presents a machine for hauling, gathering, and transporting felled trees, consisting of a mono-axle tractor, semitrailer with steering axle connected with the tractor by a universal joint, and a hoist. To insure a continuous pick-up of felled trees and their loading on the machine, the latter is equipped with a movable boom, to the end of which is attached a pincer clamp. To improve the maneuverability of the machine, the movable boom is mounted on the tractor frame and the pick-up device on the frame of the semi-trailer. To

UDC: 629.114.4:634.0.377.4

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L 26674-66

ACC NR: AP6009551

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prevent damage to the movable parts, the latter are protected by means of pipe fastened above the saddle hitch device. To facilitate the loading of large packets of trees, a pulley is attached to the protective pipe (see Fig. 1).

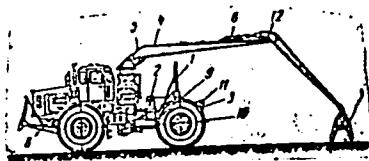


Fig. 1. 1 - pick-up assembly; 2 - hoist;  
3 - saddle-hitch device; 4 - movable boom;  
5 and 6 - power cylinders; 7 - pincer clamp;  
8 - mono-axle tractor; 9 - semitrailer;  
10 - steering axle of semitrailer; 11 - pro-  
tective pipe; 12 - pulley.

Orig. art. has: 1 diagram.

SUB CODE: 13,02/ SUBM DATE: 15Jun64

Card 2/2 BLG

SENCHENKO, M.A., inzh.

Reusable unit for trenchless laying of steel pipelines.  
Suggested by M.A.Senchenko. Rats.i izobr.vredl.v stroi.  
no.12:66-68 '59. (MIRA 13:5)

1. Trest Kuzbassshakhtomntazh Kemerovskogo sovnarkhoza.  
(Pipelines)

*SENCHENKO, M.I.*

137-58-4-8147

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 255 (USSR)

AUTHORS: Zav'yalov, A.S., Gol'dshteyn, L.Ya., Senchenko, M.I.

TITLE: The Nature of Temper (Heat) Brittleness [O prirode otpusknosti  
(teplovoy) khrupkosti]

PERIODICAL: V sb.: Metallovedeniye. Leningrad, Sudpromgiz, 1957,  
pp 127-144

ABSTRACT: As a supplement to the hypothesis of one of the authors  
(Zav'yalov, "On the Theory of the Alloying and the Heat Treatment  
of Steel," TsNII NKTP, 1943) to the effect that temper  
brittleness (TB) is induced by the appearance of particles of  
precipitated phases on the boundaries of what had previously  
been austenite grains, it is postulated that the enrichment of  
such surfaces in the tempering process by certain elements dis-  
solved in Fe increases the  $\sigma_s$  and diminishes the resistance of  
these zones to fracture, and this leads to the appearance of TB.  
This explains the high temperature of TB of high-phosphorus  
steels, while the absence of carbide particles (K) along the  
boundaries of the former austenite grains is explained by the  
mutual dislodging of P and C. In TB due to K precipitation, TB

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137-58-4-8147

The Nature of Temper (Heat) Brittleness

maximums are observed after low-temperature tempering over specific extended periods of time. This is occasioned by the simultaneous processes of precipitation of new particles of K due to the C supersaturating the ferrite and to the dissolution of fine precipitates within the grain and the fact that they come down on the boundaries, which increases the TB, and the processes of K coagulation along the grain boundaries, which decreases it. The mechanism of K redistribution is confirmed by the electron microscope and the electron diffraction camera. Reduction in TB when the duration of pre-tempering over 600° is increased is explained by reduction in the supersaturation of the ferrite by C, coagulation of small K, and enrichment thereof by alloying elements, thereby increasing their resistance to dissolution. See also RzhMet, 1957, Nr 10, abstract 20085.

A. K.

1. Steel--Brittleness--Analysis    2. Steel--Mechanical properties--Effects of heat treatment

Card 2/2

AUTHOR: Zav'yalov, A.S., Doctor of Technical Sciences, Prof.,  
Gol'dshteyn, L.Ya., Engineer, and Senchenko, M.I.,  
Engineer. 129-4-5/17

TITLE: On the problem of temper (thermal) brittleness. (O  
prirode otpusknoy (teplovoy) khrupkosti).

PERIODICAL: "Metallovedenie i Obrabotka Metallov" (Metallurgy and  
Metal Treatment) 1957, No. 4, pp. 21 - 30 (U.S.S.R.).

ABSTRACT: On the basis of tests carried out the authors estab-  
lished that the temper (thermal) brittleness is due to  
enrichment of the boundary zones of what were previously  
austenite grains by various admixtures; some of the ad-  
mixtures in the boundary zones are present in the form  
of isolated phases as, for instance, carbon in the form  
of carbides, whilst others are present in the dissolved  
state (for instance, P, however, in the case of high P  
contents phosphides may form). During enrichment of the  
boundary zones by admixtures a decrease of the breaking  
strength of these zones will occur which in many cases is  
accompanied by an increase of the yield point. As a  
result of this there will be an increase in the critical  
temperature of the brittleness of these zones which will  
bring about brittle fracture of the metal along the boun-  
dary zones. If the brittle fracture is not along the

Card 1/4

On the problem of temper (thermal) brittleness. (Cont.)  
129-4-5/17

factors which bring about a uniform distribution of the admixtures throughout the grain reduce the brittleness of the steel and the tendency of the steel to develop brittle fractures along the grain boundaries. These conclusions are based on earlier work of the authors (5, 6, 9, 10), on literary data and on experiments which are described in this paper. In these, the behaviour of two melts of Cr-Mo steel with various P contents were investigated, the compositions of which were as follows: 0.40% C, 0.28% Si, 0.42% Mn, 0.031% S, 0.028% P, 3.03% Cr and 0.46% Mo; 0.39% C, 0.24% Si, 0.49% Mn, 0.031% S, 0.097% P, 2.87% Cr and 0.41% Mo. The following heat treatment regimes were applied: heating to  $Ac_3 + 40^{\circ}\text{C}$ , quenching in oil, tempering at  $650^{\circ}\text{C}$  for ten hours followed by quenching in water; same heat treatment with the difference that after tempering the specimens were cooled to  $300^{\circ}\text{C}$  in the furnace with a speed of  $20^{\circ}\text{C}/\text{hr}$ . The results of impact tests are plotted in Fig. 3, p. 24 and these show that the P content has a very pronounced influence on the tendency of the steel to develop temper brittleness. Electron microscopic investigations enabled to establish interesting features of the distribution of carbides in high P content steels after hardening and high temperature tempering. It

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On the problem of temper (thermal) brittleness. (Cont.)  
129-4-5/17

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547920013-9  
found that P and C have the tendency of squeezing each other out. Micro-photos are included of the surface layer of a P saturated carbon steel (X 1500), of the surface layer of a P saturated carbon steel (X 75) and of titanium preparations of Cr-Ni-Mo steel (X 11000) and also electron diffraction pictures of carbides in Cr-Ni-Mo steel. There are 7 tables, 7 figures (graphs and photos) and 10 Slavic references.

AVAILABLE:

Card 4/4

Contemporary Alloys and Their Heat Treatment

SOV/1558

are primarily concerned with the development of various types of structural, tool, and heat-resistant steels and with the use of their alloying elements. Materials-handling equipment is described at some length. The treatment of alloys, particularly those of titanium, also comes within the scope of the collection. The book is thoroughly diagrammed, and a good deal of the material is shown in graphical form. Among the problems dealt with are the minimization of deformations, the introduction of the automatic control of heat-treating equipment, together with fully mechanized tool manufacture, and the optimum proportions of different alloying elements. There are numerous tables and drawings. Bibliographic listings placed at the end of chapters are predominantly Soviet. The articles comprising this collection are reports delivered at a conference held in the Scientific and Technical Propaganda House imeni F.E. Dzerzhinskiy in Moscow.

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AVAILABLE: Library of Congress

GO/ksv  
5-21-59

Card 6/6

DROBOT'KO, V.G.; SENCHENKO, O.S., redaktor; RAKHLINA, N.P., tekhnicheskiy  
redaktor.

[Variability of microorganisms; proceedings of the Conference on  
Problems of the Variability of Microorganisms] Izmenchivost'  
mikroorganizmov; trudy Konferentsii po voprosam izmenchivosti  
mikroorganizmov, sostiavshiesya v Kieve 15-18 aprelia 1953 g.  
Kiev, Izd-vo Akademii Ukrainskoi SSR, 1955. 198 p. (MLRA 9:1)

1. Akademiya nauk URSR, Kiyev. Instytut mikrobiologii.  
(MICROORGANISMS)

SUKHOYAN, P.G.; VLADIMIROV, V.I., doktor biologicheskikh nauk, otvetstvennyy redaktor; SENCHENKO, O.S., redaktor izdatel'stva; ZHUKOVSKIY, A.D., tekhnicheskiy redaktor

[The biology, taking, and supply of the Dnieper sea roach] Dneprovskaya tsvet' biologii, ulovy i sostoianie zapasov. Kiev, Izd-vo Akademii nauk USSR, 1956. 129 p.  
(Roach (Fish))

(MLRA 10:2)

PRIYMACHENKO, Anna Dmitriyevna; ROLL, Ya.V., otvetstvennyy redaktor;  
SENCHENKO, O.S., redaktor izdatel'stva; ROZENTSVEYG, Ye.N., tekhnicheskiy redaktor

[Phytoplankton of the Dnieper-Bug estuary] Fitoplankton Dneprovsko-Bugskogo limana. Kiev, Izd-vo Akademii nauk USSR, 1956. 154 p.  
(MLRA 10:1)

1. Chlen-korrespondent AN USSR (for Roll)  
(Dnieper River--Phytoplankton)

*SENCHENKO*  
PIDGAYKO, Maya Leonidovna; ROLL, Ya.V., otvetstvennyy redaktor; SENCHENKO.  
O.S. redaktor izdatel'stva; SIVACHENKO, Ye.K., tekhnicheskiy  
redaktor.

[Zooplankton of waters of the Danube Valley] Zooplankton pri-  
dunaiskikh vodoemov. Kiev, Izd-vo Akad.nauk USSR, 1957. 96 p.  
(MIRA 10:11)

1. Chlen-korrespondent AN USSR (for Roll).  
(Danube Valley--Zooplankton)

ZAGAYKEVICH, Ivan Kornilovich [Zahaikevych, I.K.]; RUDNEV, D.F. [Rudniev, D.F.], doktor biolog.nauk, otv.red.; SENCHENKO, O.S., red.; YURCHISHIN, V.I.[IUrchyshyn, V.I.], tekhn.red.

[Insects injurious to trees and shrubs in the western provinces of the Ukraine] Komakhy - shkidnyky derevnykh i chaharnykovykh porid zakhidnykh oblastei Ukrayiny. Kyiv, Vyd-vo Akad.nauk URSR, 1958. 129 p.  
(Ukraine, Western--Insects, Injurious and beneficial)

SENCHENKO, P.V.

Operations of the Gelendzhik bakery. Khleb.i kond.prom.  
6 no.6:29-32 Je '62. (MIRA 15:7)

1. Gelendzhikskiy khlebozavod Krasnodarskogo kraya.  
(Gelendzhik--Bakers and bakeries)

ACCESSION NR: A24023930

S/0280/64/000/062/0095/0101

AUTHOR: Kurnetsov, Yu. N. (Leningrad); Sen'chenko, R. P. (Leningrad);  
Chernetskiy, V. I. (Leningrad)

TITLE: Algorithm of the problem of determining optimum control-system  
parameters by the gradient method

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 2, 1964, 93-101

TOPIC TAGS: automatic control, nonlinear automatic control, gradient numerical  
method, automatic control algorithm, numerical method

ABSTRACT: The problem considered is that, with a specified control-system struc-  
ture and specified differential equations describing the motions of the controlled  
plant, such  $k_1, k_2, \dots, k_n$  parameters of the controller be determined which would  
ensure a minimum mean-square error. As a rule, the controller-plant system is  
nonlinear. A numerical "gradient" method is suggested as having the advantage  
of simplicity over variational methods in solving this problem. Recommendations

Card 1/2

ACCESSION NR: AP4028980

are given on evaluating the step and selecting the method of integrating the initial set of equations; various methods of evaluating and averaging the basic functional (the control-quality criterion) are examined. The finding of parameters which correspond to the functional extremum is performed by the gradient method. A detailed logical scheme for compiling the numerical-problem algorithm is presented. Orig. art. has: 1 figure and 55 formulas.

ASSOCIATION: none

SUBMITTED: 15Dec62                    DATE ACQ: 30Apr64                    ENCL: 00

SUB CODE: EE                          NO REF SGV: 005                          OTHER: 002

Card 2/2

SENCHENKO, YA. I.

The following is among dissertations of the Leningrad Polytechnic Institute imeni Kalinin:

" First electric stations in Petersburg (dc Stations)." 2 July 1953.  
The gradual improvement in the technical characteristics of the electric stations is described and comparative data are cited on Russian and foreign stations.

SO: M-1046, 28 Mar 56

SENCHENKO, Ya.I.; CHEREVKO, I.A.

History of the central heat supply system in Russia. Nar. z ist.  
tekh. no.2:78-87 '55. (MLRA 9:4)  
(Heating from central stations)

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001547920013-9

SEMPERFILM, Inc., known as MIRAFILM; ROLAFILM, C.G., Inah.

Saving of electric power in the manufacture of plastic products.  
From energ. 20 sec. 4:5-8 At 1%  
(MIRA 13:8)

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001547920013-9"

28216  
S/194/61/000/005/050/078  
D201/D303

9,2100 (1153,1385,1482,1329)

AUTHORS:

Gorelik, A.L. and Senchenko, Ya.I.

TITLE:

Controlled semiconductor resistors

PERIODICAL:

Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 5, 1961, 21-22, abstract 5 D171 (Tr. Khar'kovsk.  
politekhn. in-ta, 1960, 30, no. 1, 189-202)

TEXT: An experimental study has been made of volt-ampere characteristics of non-linear thyrite resistors (TR). The results are presented in the form of graphs and approximate formulae. The TR were prepared in the form of square plates with four symmetrical pressure welded electrodes. One pair of electrodes placed at the diagonal was connected to the input, the other pair to the output. For the S.C. output the following expression is obtained

$$\frac{I_2}{I_1} = \frac{U_1}{A + BU_1},$$

where  $I_2$  - output current,  $I_1$  and  $U_1$  - input current and voltage,

Card 1/2

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Controlled semiconductor resistors

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D201/D303

A and B - constant factors. For practical calculations with  $U_1 > 50$  V, an approximate formula is given  $I_2 = 10^{-14} U_1^{4.48}$ . The properties of TR were also investigated when the voltage source was in the output. Possibilities are shown of using TR as the controlled element in automatic control systems and designing circuits having a variable time constant. 5 references. [ Abstracter's note: Complete translation ]

4X

Card 2/2

SENCHENKO, Ya.I.

Aleksandr Ivanovich Smirnov, an outstanding electrical engineer,  
(1851-1910) Trudy Inst. ist. est. i tekhn. 44:171-178 '62.  
(MIRA 18:3)

1. LOZOVSKY, A. T. Ings., SINCHENKO, YE. F., YANOVENKO, V. F.  
2. USSR (600)  
4. Condensers (Steam)  
7. Preventing the overcooling of condensate, Elek. sta. 23 No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

IL'KOV, B.F.; KIREYEV, G.A.; LOZOVSKIY, A.T.; LAKHMAN, I.L.; NIKOLAYEV, G.A.;  
PAVLUSHCHENKO, Y.P.; ROZHDESTVENSKIY, I.K.; RUVIMSKIY, I.M.; SAVINOV-  
SKIY, D.A.; SENCHENKO, Ye.F.; SEREDA, A.S.; SOKOLIK, V.D.; RASSADNI-  
KOV, Ye.I., redaktor; SHELYAGINA, A.A., redaktor; LARIONOV, G.Ye.,  
tekhnicheskiy redaktor

[Operation of the Sredne-Uralsk Hydroelectric Power Station] Opyt  
ekspluatatsii Sredne-Ural'skoi GRES. Pod red. E.I.Rassadnikova i  
I.K.Rozhdestvenskogo. Moskva, Gos. energ. izd-vo, 1956. 103 p.  
(MLRA 10:1)

(Sredne-Uralsk Hydroelectric Power Station)

KUCHEROV, Yu., kapitan 3 ranga; SENCHENKO, Yu., kapitan-leytenant

We should try to find a key to each sailor's heart. Komm.  
Vkoruzh. Sil 1 no.13:58-61 Jl '61. (MIRA 14:7)  
(Russia—Navy—Sea life)

SEMINENKO-PYACHENKO, B.P., participant

Total anti-Soviet activity and the position of the Soviet Union in the world.  
Trudy Mat. neg. inde. no. 61050-350 "63. (July 1943)

I. Refugee activities abroad (see, esp. V. A. Shchegoleva)  
Kharkov, mod. training institutions.

SNITSEREV, Georgiy Aleksandrovich; SENCHENKOV, A.F., redaktor; VORONIN  
K.P., tekhnicheskiy redaktor.

[Nomograms for output transformer computations] Nomogrammy dlja  
rascheta vkhodnykh transformatorov. Moskva, Gos.energ.izd-vo,  
1954. 32 p. (Massoviaia radiobiblioteka, no.212) (MERA 8:8)  
(Nomography(Mathematics)) (Electric transformers)

SENCHENKOV A.F.

PLONSKIY, A.F.; BERG, A.I., redaktor; DZHIGIT, I.S., redaktor; YELIN, O.G.,  
redaktor; KULIKOVSKIY, A.A., redaktor; SMIRNOV, A.D., redaktor;  
TARASOV, F.I., redaktor; TRAMM, B.P., redaktor; CHECHIK, P.O.,  
redaktor; SHASHMUR, V.I., redaktor; SENCHENKOV, A.F., redaktor;  
SKVORTSOV, I.M., tekhnicheskiy redaktor

[Quartz resonators] Kvartsevye rezonatory. Moskva, Gos. energ.  
izd-vo, 1954. 94 p. [Microfilm] (MIRA 7:10)  
(Electric resonators)

*Senchenkov, A.F.*

AID P - 612

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 16/35

Authors : Rozenblat, M. A., Kand. of Tech. Sci., Scientific Research Institute of the Ministry of Transportation NII MK USSR, Senchenkov, A. F., Eng., NII MRP USSR Scientific Research Institute of the Ministry of the Fish Industry

Title : Magnetic amplifiers (History of electrical engineering)

Periodical : Elektrichesivo, 8, 67-72, Ag 1954

Abstract : Described are the early Russian discoveries in this field by Stoletov, A. G. in 1871-72 and Yablochkov, P. N. in 1876, who according to the author were the pioneers in experimenting with the problems of magnetic amplification. The first magnetic amplifier of sound frequencies was constructed in 1920 by Shenfer, K. I., a Russian Academician. Further developments in Russia and other countries are described. 5 diagrams, 27 references (1915-1952).

Institutions: See Author affiliations

Submitted : No date

SENCHENKOV, Aleksandr Filippovich; FUNSHTEYN, Lidiya Grigor'yevna; TARASOV, F.I., redaktor; LARIONOV, G.Ye., tekhnicheskij redaktor

[The use of ferrite in radio apparatus] Primenenie ferritov v radioapparature. Moskva, Gos. energ. izd-vo 1956. 79 p.  
(Massovaia radiobiblioteka, no.250) (MIRA 10:2)  
(FERRITE (STEEL CONSTITUENT))  
(RADIO--APPARATUS AND SUPPLIES)

PHASE I BOOK EXPLOITATION SOV/3721

Senchenkov, Aleksandr Filippovich, and Pavel Vasil'yevich Stepanov

Konstruktsiya i tekhnologiya izgotovleniya razreznykh lentochnykh serdechnikov dlya transformatorov (Design and Construction of Split-Ribbon Cores for Transformers) Moscow, 1958. 35 p. (Series: Peredovoy opyt proizvodstva. Seriya "Radiopriborostroyeniye," vyp.4) 3,000 copies printed.

Reviewer: T.I. Dmitriyeva; Ed.: B.A. Borodin; Tech. Ed.: R.A. Sukhareva.

PURPOSE: This booklet is intended for people interested in the production of radio and television receiver components.

COVERAGE: The booklet deals with methods of the production of split-ribbon cores for low-power transformers used in radio and television receivers. The authors emphasize the need for economizing costly materials in view of the fact that, according to plans,

Card 1/3

MATVEYEV, Georgiy Aleksandrovich; KHOMICH, Vadim Ivanovich; SENCHENOV,  
A.F., red.; YEMZHIN, V.V., tekhn. red.

[Electric coils with ferrite cores] Katushki s ferritovymi ser-  
dechnikami. Moskva, Gosenergoizdat, 1962. 38 p. (Massovaia  
radiobiblioteka, no.443) (MIRA 16:1)  
(Electric coils) (Cores (Electricity))

BELOPOL'SKIY, Isay Il'ich; PIKALOVA, Liliya Grigor'yevna; SENCHENKOV,  
A.F., red.; LARIONOV, G.Ye., tekhn. red.

[Design of electric transformers and small chokes] Raschet  
transformatorov i drosseli maloi moshchnosti. Moskva, Gos-  
energoizdat, 1963. 270 p. (MIRA 16:7)  
(Electric transformers) (Electric coils)

AZARKH, Solomon Khatskelevich; FRID, Yevgeniy Abramovich;  
SENCHENKOV, A.F., red.; BORUNOV, N.I., tekhn. red.

[Microminiaturization of radio-electronic equipment]  
Mikrominiaturizatsiya radioelektronnoi apparatury. Mo-  
skva, Gosenergoizdat, 1963. 78 p. (MIRA 17:3)

AUTHORS: Senchenkov, A. P., Kuznetsov, F. M. SOV/89-5-2-4/36

TITLE: Measurements of the Neutron Spectrum in the Thermal Column of the Atomic Power Station Reactor (Izmereniye spektra neytronov v teplovoy kolonne reaktora atomnoy elektrostantsii)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 2, pp. 124-129 (USSR)

ABSTRACT: A monochromator is described which consists of 19 pertinax- and 2 brass disks with soldered-on cadmium. The profiles of the disks correspond to the so-called "profile of equal resistance". Length of the rotor: 53 cm, diameter: 27 cm, total weight: 55 kg. The maximum number of revolutions amounts to 12 000 revs per minute. Along the surface of the rotor 297 slits at an angle of 1,6° each are located; their width amounts to 0,8 mm and their depth to 13 mm. The rotor moves within a vacuum chamber (< 0,5 torr). The rotor is revolved by means of a three-phase asynchronous motor with a power output of 2,5 kW. The monochromator permits measurement of the neutron spectra within the energy range of 0 - 0,5 eV. The neutron spectrum of the thermal column of the reactor of the atomic power station is measured together with the monochromator described. At neutron

Card 1/2

Measurements of the Neutron Spectrum in the  
Thermal Column of the Atomic Power Station  
Reactor

SOV/89-5-2-4/36

velocities of 600, 1 000 and 1 650 m/sec the spectrum shows a  
marked jump.

The temperature of the neutron gas was determined as being  
354°K by the method of the least square, whereas graphite has a  
temperature of 304°K. There are 3 figures and 13 references, 4 of  
which are Soviet.

SUBMITTED: January 11, 1958

Card 2/2

*S E N C H E N K O U A.P.*

21(4) PHASE I BOOK EXPLOITATION  
SOV/2533  
International Conference on the Peaceful Uses of Atomic Energy.  
2nd, Geneva, 1956.

Dobradly sovetskikh uchenykh; Yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists Nuclear Reactors and Nuclear Power.) Moscow, Atomizdat, 1959, 707 p. (Series: Iti: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Kravsin, Doctor of Physical and Mathematical Sciences, A.I. Lepunsky, Member, Ukrainian SSR Academy of Sciences, I.V. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Parygin, Doctor of Physical and Mathematical Sciences; Eds.: A.P. Alyabyev, Tech. Ed.; Ye. I. Kuzel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor design, as well as for professors and students of higher technical schools where reactor design is taught.

CONTENTS: This is the second volume of a six-volume collection on the peaceful uses of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy held from September 1 to 13, 1956 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors; the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineers. Yu. I. Kuzel' is the science editor of this volume. See Sov/2001 for titles of all volumes of the set. References appear at the end of the articles.

- |  |  |   |  |  |  |  |  |   |   |  |
|--|--|---|--|--|--|--|--|---|---|--|
| Moskovskiy, V.L., V.S. Dikarev, M.B. Tegizaryan, and Yu. S. Saltykov. Measuring Neutron Spectra in Uranium Water Lattices (Report No. 2152) 546                | Krasin, A.K., B.G. Dubovitsky, M.N. Lantsov, Yu.Th. Glazkov, R.E. Goncharov, A.V. Kamarev, L.A. Geraseev, V.V. Yavlov, Ye. I. Tsvetkin, and A.P. Senechnikov. Studying the Physical Characteristics of a Beryllium-Moderator Reactor (Report No. 2145) 555 | Dalatin, A.D., S.A. Nesirovskaya, A.P. Rudik, Yu. G. Abov, V.P. Belkin, and P.A. Krupchitskii. Critical Experiment on an Experimental Heavy-Water Reactor (Report No. 2036) 570 | Marchuk, G.I., V. Ya. Pupko, Ye. I. Pogudina, V.V. Smelov, I.P. Tyuterev, S.M. Platonova, and O.I. Druzhzhina. Certain Problems in Nuclear Reactor Physics and Methods of Calculating Them (Report No. 2151) 598 | Slobodin, G.V. and V.N. Semenov. Determination of Control Rod Effectiveness in a Cylindrical Reactor (Report No. 2469) 613 | Gelfand, I.M., S.M. Fornberg, A.S. Prolov, and N.N. Chentsov. Using the Monte Carlo Method of Random Sampling for Solving the Kinetic Equation (Report No. 2411) 628 | Ialetskiy, M.I. Neutron Distribution in a Heterogeneous Medium (Report No. 2189) 634 | Kazarnovskiy, M.V., A.Y. Stepanov, and P.L. Shapiro. Neutron Thermalization and Diffusion in Heavy Media (Report No. 2148) 651 | Vernik, A.I., V.S. Yermakov, and A.V. Lykov. Using the Onsager Theory for Studying Neutron Diffusion in the Absorbing Media of Nuclear Reactors (Report No. 2224) 668 | Broder, D.L., S.A. Kurchin, A.A. Khurkov, V.V. Levin, and V.V. Orlov. Studying the Spatial and Energy Distribution of Neutrons in Different Media (Report No. 2177) 671 | Dobryayev, A.B. Boron Ionization Chambers for Work in Nuclear Reactors (Report No. 2084) 690 |
| Mirillin, V.A., and S.A. Ulybin. Experimental Determination of Specific Volumes of Heavy Matter in a Wide Temperature and Pressure Range (Report No. 2471) 696 | "  | "   | "  | "  | "  | "  | "  | "   | "   |  |

24.6760  
26.2332

27692  
S/120/61/000/003/001/041  
E032/E314

AUTHORS: Senchenkov, A.P. and Kersnovskiy, S.V.

TITLE: A 500 keV Electron-beam Source

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 3,  
pp. 26 - 32

TEXT: A description is given of an electron-beam source which is capable of producing 250  $\mu$ A at 500 keV. The beam source consists of an electron gun and an electrostatic accelerating system of the type described by A.P. Grinberg (Ref. 1-Method of charged-particle acceleration, p.57, 1950, Gostekhizdat) and in Ref. 2 ("Engineering", 1959, Vol. 187, No. 4857, p.466). A schematic drawing of the apparatus is shown in Fig. 5. All the dimensions indicated in this figure are in mm. The high-voltage part is mounted on the base plate 2, which is fixed to the end of the outer jacket 1. The high-voltage electrode 4 is supported by the posts 3. The rotor 5 is located between the base plate and the high-voltage electrode. The axis of the rotor is kept in position by the massive supports 6.

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S/120/61/000/003/001/041  
EO32/E314

A 500 keV Electron-beam Source

The supports, rotor and pillars of the high-voltage electrode are made of perspex. The rotor is rotated by the motor 7 (2 850 r.p.m.) through the perspex drive 8 and a pair of conical gears 9 and 10 (brass and textolite, respectively). All the high-voltage details of the machine are in an SF<sub>6</sub>

atmosphere. The outer diameter of the rotor is 36 cm and the charged surfaces move at a rate of 35 m/s. The design of the charge and discharge device is shown in Fig. 4. The charging voltage is applied between the plates located in the grooves of the rotor and the brushes (a set of sewing needles). The distance between the needles is 2 mm and the distance between the ends of the needles and the plates is 3 mm. The width of the "brush" is 22 mm. The brushes and the plates are insulated from the base plate. The perspex drive of the motor 7 also drives the generator 11. The latter generator is used to supply the electron gun. The accelerating tube 12 is shown in greater detail in Fig. 6, and is also made of perspex. It contains the intermediate chromium-plated brass electrodes 13.

X

Card 2/6

A 500 keV Electron-beam Source

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S/120/61/000/005/001/041  
E052/E514

These intermediate electrodes are connected to the contact electrodes 14 and the outside of the tube. The second version of the tube is shown in Fig. 6. The first tube was found to withstand voltages up to 420 kV for short periods of time and up to 320 kV continuously. The second version withstands up to 600 kV over short periods of time and up to 500 kV otherwise. The electron gun 16 is of the three-electrode type (Electron Microscopes (edited by A.A. Lebedev) p. 81, 1954. Gostekhizdat; Ref. 3); the cathode 17 is made of tungsten wire, 0.01 mm in diameter, and the focusing (18) and accelerating (19) electrodes have inserts such that the diameter of the apertures in them can easily be altered. The position of the cathode is regulated by the bellows 20 and three adjusting screws 21. The cathode lies within the glass cylinder 22 so that it can be viewed from outside. The accelerating electrode is maintained at +3 kV relative to the cathode. The beam current is regulated by controlling the cathode supply and the potential difference between the cathode and the focusing electrode. The diameter of the electron beam

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A 500 keV Electron-beam Source

27692  
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E052/E314

at the output of the apparatus is 5 mm. The diameter can be increased with the aid of the coil 23. The electron beam is extracted through the aluminium foil 24 ( $5.12 \text{ mg/cm}^2$ ), which is supported by the grid 26. The system is evacuated by a backing pump, an oil-diffusion pump 27, having a speed of 100 litres/sec, and a liquid-nitrogen trap 28. The electron-beam source is mounted on the heavy support 29 and is covered by an aluminium jacket (6 mm thick). The pressure of the SF<sub>6</sub> is 3 atm. (measured by the manometer 30).

Fig. 5 shows the short-circuit current ( $\mu\text{A}$ ) as a function of the charging voltage (kV). Acknowledgments are expressed to V.A. Dmitriyevskiy, A.M. Susov and V.I. Gordinet for their assistance. There are 8 figures and 3 references: 2 Soviet and 1 non-Soviet.

SUBMITTED: June 15, 1960

Card 4/6

40052

S/089/62/013/002/006/011  
B102/B104

2 / 000

AUTHOR: Senchenkov, A. P.

TITLE: Focusing of recoil protons for separating the monoenergetic recoil neutrons

PERIODICAL: Atomnaya energiya, v. 13, no. 2, 1962, 178-179

TEXT: Between 10 and 100 kev the separation of monoenergetic neutrons is very difficult; here a neutron selector is suggested whereby most of the difficulties can be avoided. Its basic working principle is that a parallel beam of fission neutrons impinges on a hydrogen-containing scatterer. The energy  $E_n$  of the neutrons scattered by the hydrogen atoms at an angle of  $90-\alpha$  is  $E_0 \sin^2 \alpha$ , that of the recoil protons is  $E_0 \cos^2 \alpha$ , where  $E_0$  may assume any value within the fission spectrum. The entire arrangement is placed in a magnetic field vertical to the scattering plane. A coincidence circuit records only those neutrons whose recoil protons coming from A are incident on B (Fig. 2). These must describe an

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S/089/62/013/002/006/011  
B102/B104

Focusing of recoil protons ...

arc having the radius of curvature  $R_p = L/2\sin\alpha$  and their energy must be equal to

$$E_p = \frac{R_p^2 e^2 H^2}{2m} = \frac{L^2 e^2 H^2}{4 \sin^2 \alpha m}$$

The energy of the corresponding scattered neutrons is

$$E_n = E_p \tan^2 \alpha = \frac{L^2 e^2 H^2}{8m} \frac{1}{\cos^2 \alpha} \quad (1)$$

At small  $\alpha$ ,  $1/\cos^2 \alpha \approx 1$  can be written, from which it follows that if the recoil proton is incident on B the scattered neutron energy is independent of the initial neutron energy or of the scattering angle. The selector operating on this principle (Fig. 2) differs from the usual spectrometers by the "focusing". An disadvantage of this selector is the uncertainty of pulse delay in the proton channel. There are 2 figures.

SUBMITTED: October 28, 1961

Legend to Fig. 2: (1) scatterer; (2) collimator; (3) crystal; (4) photomultiplier; (5) specimen; (6) coincidence circuit; (7) output.

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L 19859-65 ARG/EEO-2/EWG(j)/EWT(d)/FBD/FSF(h)/FSS-2/EWG(r)/EWT(l)/FB0/  
 EWP(m)/EWT(m)/FS(v)-3/EPF(c)/EEC(k)-2/EWG(s)-2/ECS/EPF(n)-2/EWG(v)/EWP(c) |  
 EWA(d)/EEC-4/EPR/EEC(t)/T/EWG(a)/EWP(h)/EPA(bb)-2/EEC(c)-2/EWG(e)/FCS(k) B+/  
 ACCESSION NR AM5001720 BOOK EXPLOITATION EWA(h) Pn-4/Po-4/ S/ ST/  
 Pd-1/Pp-4/Pe-5/Pq-4/Pac-4/Pr-4/Ps-4/ TT/

Senchenkov, Anatoliy Pavlovich Pae-2/Peb/Pi-4/Pu-4/Pw-4 AEDC(b)/SSD/ WW/  
 SSD(b)/SSD(a)/AFWL/ASD(s)/RAEM(c)/ESD(t) MLX/

Atomic rockets and problems of mastering space; a popular science article GW  
 (Atomnye rakety i problemy osvoyeniya kosmosa; nauchno-populyarnyy  
 ocherk), Moscow, Atomizdat, 1964, 183 p. illus., biblio. 6,000 copies  
 printed. Series note: Nauchno-populyarnaya biblioteka Atomizdata

TOPIC TAGS: nuclear rocket, nuclear space station, electric propulsion, long  
 range communication

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L 19859-65  
ACCESSION NR AM5001720

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SUB CODE: PR, SV, EC      SUBMITTED: 22Jun64      NR REF Sov: 013  
OTHER: 014      DATE ACQ: 19Nov64

Card 2/2

ACCESSION NR: AP4041450

S/0089/64/016/006/0510/0514

AUTHORS: Migachev, A. I.; Senchenkov, A. P.

TITLE: Radiochemical effect of fast electrons on uranium fluorides

SOURCE: Atomnaya energiya, v. 16, no. 6, 1964, 510-514

TOPIC TAGS: reactor fuel, uranium compound, fluorocarbon polymer,  
fluorine compound, fluorination, radiation chemistryABSTRACT: Continuing an earlier investigation (V. A. Dmitriyevskiy  
and A. I. Migachev, Atomnaya energiya, v. 6, 533, 1959) of irradiation-induced decomposition of  $\text{UF}_6$ , which is of great interest in  
connection with the problem of the design of gas-fuel reactors,  
the authors investigated the effect of fast-electron irradiation of  
 $\text{UF}_6$ ,  $\text{UF}_5$ , and  $\text{UF}_4$ . The apparatus and the determination of the radiation dose are described in detail. Irradiation of  $\text{UF}_6$  in the

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ACCESSION NR: AP4041450

presence of impurities showed that He, Br<sub>2</sub>, and HF do not affect the behavior of UF<sub>6</sub> bombarded with fast electrons, but fluorine-containing hydrocarbons take fluorine atoms away from the UF<sub>6</sub> and reduce it to UF<sub>5</sub>. The radiation-chemical yield of the UF<sub>6</sub> molecule decomposition reaction is found to be 0.011 molecule per 100 eV. Under prolonged irradiation of the UF<sub>6</sub>, a dynamic equilibrium  $UF_6 \rightleftharpoons UF_5 + \frac{1}{2}F_2$  is established. Some tentative data are obtained on the rate of formation of UF<sub>5</sub> when UF<sub>5</sub> and UF<sub>4</sub> are bombarded with fast electrons. The rate of radiation fluoridation of UF<sub>5</sub> and UF<sub>4</sub> is found to be proportional to the fluorine pressure and the square root of the radiation intensity. The authors are grateful to V. A. Dmitriyevskiy for a discussion of the results and continuous interest, and to V. I. Gorodinets for participating in the adjustment of

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ACCESSION NR: AP4041450

the apparatus." Orig. art. has: 7 figures and 3 formulas.

ASSOCIATION: None

SUBMITTED: 30Oct63

ENCL: 03

SUB CODE: NP, GC

NR REF SOV: 003

OTHER: 000

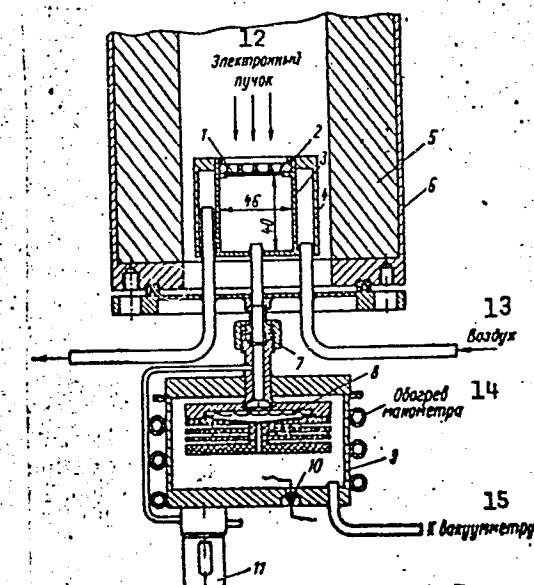
Card 3/6

ACCESSION NR: AP4041450

## Apparatus for irradiation of uranium fluorides:

- 1 - nickel foil, 2 - nickel insert,  
3 - nickel dish, 4 - steel jacket,  
5 - lead shield against gamma rays  
6 - jacket of accelerator tube  
7 - lead gasket, 8 - inductive-  
manometer membrane, 9 - inductive-  
manometer jacket, 10 - electric lead  
to inductive manometer, 11 -  
valve for filling the apparatus with  
the investigated gas, 12 - electron  
beam, 13 - air, 14 - manometer  
heating, 15 - to vacuum meter

ENCLOSURE: 01

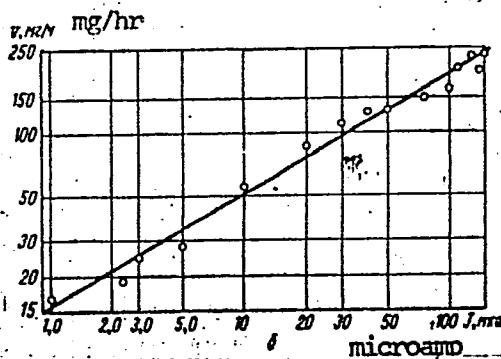
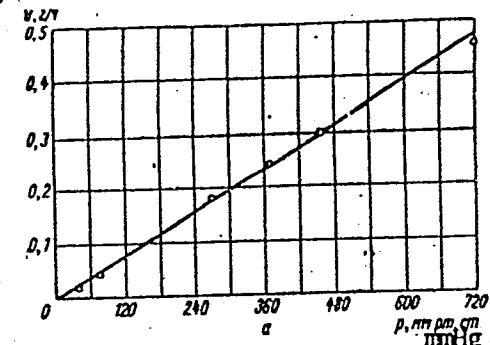


Card 4/6

ACCESSION NR: AP4041450

ENCLOSURE: 02

Dependence of the rate of radiation-chemical fluoridation of  $\text{UF}_5$  on the fluorine pressure (a) and on the electron beam intensity (b)



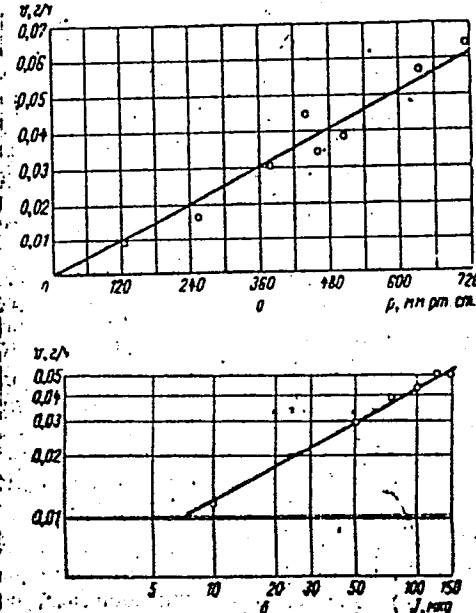
Card 5/6

ACCESSION NR: AP4041450

ENCLOSURE: 03

Dependence of rate of radiation-chemical fluoridation of  $\text{UF}_4$  on the fluorine pressure (a) and on the electron beam intensity

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L 00345-66 EMT(1)/EPA(s)-2/EMT(m)/EMP(w)/EMT(n)-2/T/EMP(t)/EMP(b) IJP(c)

JD/WW/JG

ACCESSION NR: AP5019224

UR/0056/65/049/001/0124/0126

AUTHOR: Kikoin, I. K.; Senchenkov, A. P.; Gel'man, E. V.; Korsunskiy, M. M.;  
Naurzakov, S. P.

TITLE: Electric conductivity and density of metallic vapor

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965,  
124-126

TOPIC TAGS: mercury, electric conductivity, pressure effect, temperature dependence,  
high temperature research

ABSTRACT: The article describes an investigation of the electric conductivity of mercury in the transcritical range of temperatures and pressures. The experiments were carried out in a chamber in which pressures up to 4000 atm could be established by means of gaseous argon compressed with a thermal compressor. The mercury was contained in a capillary whose mid-section could be heated electrically to 2000C. The transcritical conditions were established only in the middle part of the capillary. The mercury was activated in a reactor before the experiments, and its density was determined by measuring the  $\gamma$  radiation from the Hg<sup>203</sup>. The measured quantities were automatically recorded with multichannel automatic plotter. The

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ACCESSION NR: AP5019224

family of curves plotted at different pressures made it possible to determine the "electrical equation of state"  $r = f(\rho, T)$  and the thermodynamic equation for the density  $\rho = \phi(P, T)$ . ( $r$  = resistivity,  $\rho$  = density,  $T$  = temperature,  $P$  = pressure). The critical temperature of mercury was found to be  $1450 \pm 50^\circ\text{C}$ . The measurement accuracy was insufficient to determine the temperature coefficient of resistivity, but it was found to be negative at densities below  $7-8 \text{ g/cm}^3$  and close to zero at higher density. A more detailed description of the results and of the experiments will be published elsewhere. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 19Feb65

ENCL: 00

SUB CODE: EM, TD

NO REF SOV: 001

OTHER: 003

Card 2/2

SENCHENKOVA, N.I.

Principles for better regulation of wages in the textile  
industry. Tekst.prom. 20 no.1:4-7 Ja '50.  
(MIRA 13:5)

(Textile industry) (Wages)

SENCHENKOVA, N.I.

Principles for the regulation of wages of engineers, technical  
workers and employees. Tekst.prom. 20 no.4:9-12 Ap '60.  
(MIRA 13:7)  
(Textile workers)  
(Wages)

KISELEV, Boris Abramovich; CHMUTOV, K.V., otv.red.; SENCHENKOVA, T.M.,  
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[Glass reinforced plastics, the material of the future]  
Stekloplasty - material budushchego. Moskva, Izd-vo Akad.  
nauk SSSR, 1959. 61 p. (MIRA 12:7)  
(Glass reinforced plastics)

## AUTHORS:

Kochetkov, N. K., Kudryashov, L. I., SOV/79-29-2-61/71  
Senchenkova, T. M.

## TITLE:

Reaction of  $\beta$ -Chlorovinyl Ketones With  $\beta$ -Dicarbonyl Compounds  
(Vzaimodeystviye  $\beta$ -khlorvinilketonov s  $\beta$ -dikarbonil'nymi soyedineniyami). VIII. Synthesis of Polysubstituted Benzene Derivatives. A New Reaction Type of Diene Synthesis (VIII. Sintez polizameshchennykh proizvodnykh benzola. Novyy tip reaktsii diyenovogo sinteza)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 650-657 (USSR)

## ABSTRACT:

An earlier report (Ref 1) described the reaction of  $\beta$ -chlorovinyl ketones with acetoacetic ester in the presence of potash and it was shown that this reaction does not have a well-defined character. Ethyl ester of 4-alkyl salicylic acid forms as chief product when there is a great excess of acetoacetic ester. With a lower excess of acetoacetic ester also the yield in 4-alkyl salicylate drops abruptly, so that in the case of the reaction of methyl- $\beta$ -chlorovinyl ketone with acetoacetic ester it is made possible to isolate in large quantities a crystalline product with the melting point 61°. The present paper deals with the explanation of the structure of this

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Reaction of  $\beta$ -Chlorovinyl Ketones With  $\alpha$ -Dicarbonyl Compounds. VIII. Synthesis of Polysubstituted Benzene Derivatives. A New Reaction Type of Diene Synthesis

SOV/79-29-2-61/71

product and its analogues, as well as its way of formation. Experiments gave the following results: On condensing 2 mols of methyl- $\beta$ -chlorovinyl ketone with 1 mol of acetoacetic ester in the presence of potash, the ethyl ester of 2-methyl-3,5-diacetyl benzoic acid is formed. A scheme is suggested for the formation of this compound, according to which in the first stage the product of monoketovinylation in its enol shape enters the reaction with the second molecule of  $\beta$ -chlorovinyl ketone (diene synthesis). Thus it is established for the first time that the unsaturated dicarbonyl compounds are capable of playing the role of dienes in the reactions of diene synthesis. Like various  $\beta$ -chlorovinylketones, also  $\beta$ -diketones are capable of this reaction, which has a general preparative significance. It is also important for the synthesis of various polysubstituted benzene derivatives. On the basis of the structural experiments, the product with the melting point  $61^{\circ}$  was found to be a benzene derivative, showing an acetyl, carbethoxy and methyl group in positions 1,2,3 and 5. There are 10 references, 6 of which are Soviet.

Card 2/3

Reaction of  $\beta$ -Chlorovinyl Ketones With  $\beta$ -Dicarbonyl Compounds. VIII. Synthesis of Polysubstituted Benzene Derivatives. A New Reaction Type of Diene Synthesis

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: December 20, 1957

Card 3/3